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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
CHANG, RICHARD	

ART UNIT	PAPER NUMBER
2663	

DATE MAILED: 03/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/761,557	AMIT, MATI	
	Examiner	Art Unit	
	Richard Chang	2663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 March 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6, 10-15, 17 and 20-25* is/are rejected.

7)☒ Claim(s) *7-9,16,18,19 and 26* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's arguments with respect to claims 1, 11, 17 and 20-22 have been fully considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-6, 10-15, 17 and 20-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over US patent No. 6,574,240 ("Tzeng") in view of US patent application publication No. 2001/0049740 ("Karpoff").

Regarding Claim 11, Tzeng teaches a method and network switch for performing layer 2 (L2) and layer 3 (L3) switching in an Ethernet (IEEE 802.3) network (10) (See Fig. 1) comprising of

a L2/L3 switch (25) coupled to the gigabit interface (16),

a central processing unit (CPU, 26) coupled to the L2/L3 switch (25),

a plurality of transmitters (20) coupled to the L2/L3 switch (25) and a plurality of receivers (20) coupled to the L2/L3 switch (25) (See Fig. 1, Col. 3, lines 16-41).

Tzeng teaches substantially all the claimed invention but did not disclose expressly the particular application involving limitations of "a fibrer interface for the gigabit network".

Karpoff. teaches a method and system for providing multimedia information on demand over wide area networks wherein the interconnect medium (129) to the high-speed network (130) is typically a gibabit or higher network interconnect using a fibre interface (See Fig. 11, page 8, section [0109]).

A person of ordinary skill in the art would have been motivated to employ Karpoff. in Tzeng in order to obtain a method and network switch for performing layer 2 and layer 3 switching in a gigabit network and to take advantage of using a Fibre interface for a gigabit network in claim 11.

The suggestion/motivation to do so would have been to use a Fibre interface for a gigabit network, as suggested by Karpoff in page 8, section [0109]. At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to which the invention pertains to combine Karpoff with Tzeng to obtain the inventions specified in claim 11.

Regarding claim 17, this claim has limitation that is similar to those of claim 11 and Tzeng further teaches that the L2/L3 switch (25) with the port filter (24) includes

a receive FIFO (51), a MAC queuing logic (52), a memory (53) (first means for receiving data ... MAC function),

a MAC dequeuing logic (54), a transmit FIFO (55), and a processor interface module (57) (second means for transmitting ... MAC function), wherein the L2/L3 switch

(25) (data transmission device) is coupleable to a communications network for controlling the downstream and upstream communications with the first means and second means, respectively (See Fig. 5, Col. 6, lines 19-28), thus it is rejected with the same rationale applied against claim 11 above.

4. Claims 1-2, 17 and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over US patent No. 6,574,240 ("Tzeng") in view of US patent application publication No. 2001/0049740 ("Karpoff") and US patent No. 5,892,768 ("Jeng").

Regarding claims 1 and 20-22, as discussed above, Tzeng and Karpoff teach substantially all the claimed invention but did not disclose expressly the particular application involving limitations of "a first integrated circuit (IC) including one or more receivers and a first media access control (MAC) function; and a second IC including one or more transmitters and a second MAC function".

Jeng teaches a device for bridging Local Area Networks implementing Ethernet network protocols with Wide Area Networks (A communication device for a cable communications network) comprising of

MAC (46) and its coupled buffer memory (50) controls the RX path, store and process packets from Ethernet (a first integrated circuit (IC) including ... a first media access control (MAC) function),

MAC (48) and its coupled buffer memory (52) is controls the TX path, store and process frames being sent to the Ethernet (a second IC including ... a second MAC function) (See Fig. 2, Col. 3, line 55 to Col. 4, line 65).

Jeng in view of Tzeng and Karpoff teaches substantially all the claimed invention but did not disclose expressly the particular application involving limitations of separating the MAC (46) controls the RX path and MAC (48) controls the TX path from a single IC into two individual IC's.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to integrate both the MAC (46) with receiver for the RX path and MAC (48) with transmitter for the TX path into a single IC for both same functions and less chip count as in the industrial design trend since it has been held by In re Dulberg, 289 F.2d 522, 523, 129 USPQ 348,349 (CCPA 1961).

Regarding claim 2, this claim has limitation that is similar to those of claim 1 and Liang further teaches that PHY (28) translates the Ethernet wire signal to the TTL digital level in the well-known Ethernet protocol hierarchy over Ethernet line (26) (an analog to digital (A/D) converter coupled to an input of the first IC and an up converter coupled to an output of the second IC) (See Fig. 1, Col. 1, line 65 to Col. 2, line 4), thus it is rejected with the same rationale applied against claim 1 above.

Regarding claims 10 and 23, these claims have limitation that is similar to those of claims 1 and 11, and Tzeng further teaches an integrated multiport switches (12) (hub) (See Fig. 1, Col. 3, lines 17-19), thus it is rejected with the same rationale applied against claim 11 above.

Regarding claim 12, this claim has limitation that is similar to those of claim 11 and Tzeng further teaches that data packets received at the fiber interface (16) are

provided to the transmitters (20) without being read by the CPU (26) (See Fig. 1, Col. 3, lines 16-41), thus it is rejected with the same rationale applied against claim 11 above.

Regarding claims 3, 13 and 24, these claims have limitation that is similar to those of claims 1, 11 and 20, and Tzeng further teaches that data packets received at the fiber interface (16) are provided to the receivers (20) without being read by the CPU (26) (See Fig. 1, Col 3, lines 16-41), thus it is rejected with the same rationale applied against claim 11 above.

Regarding claims 6 and 14, these claims have limitation that is similar to those of claims 1 and 11, and Tzeng further teaches that the CPU (26) may remotely program another switch (remote from the communication device) (See Fig. 1, Col. 4, lines 2-9), thus it is rejected with the same rationale applied against claim 11 above.

Regarding claims 4, 15 and 25, these claims have limitation that is similar to those of claims 1, 11 and 20, and Tzeng further teaches that the CPU (26) may periodically downloads and learns the IP address table (64) from the L3 switching logic (44) (adapted to download a table containing instructions for routing the data packets) (See Fig. 6, Col. 7, lines 46-59), thus it is rejected with the same rationale applied against claim 11 above.

Regarding claim 5, this claim has limitation that is similar to those of claim 1 and Tzeng further teaches that the CPU (26) is coupled with a plurality of MAC's (22) (first MAC and second MAC IC's) (See Fig. 1, Col. 3, lines 29-30), thus it is rejected with the same rationale applied against claim 11 above.

Allowable Subject Matter

5. Claims 7-9, 16, 18-19 and 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and if no art rejection can be applied.

Examiner's Statement of Reasons for Allowance

6. The following is an examiner's statement of reasons for allowance:

The prior art along or in combination fails to teach or make obvious the limitations that specifically comprises:

"the first MAC function is adapted to handle defragmentation, ***deconcatenation***, suppress packet payload headers, and perform reverse payload header suppression" as recited in the *dependent claim 7,*

"the second MAC function is adapted to encrypt packets, handle payload header suppression, and put Ethernet packets inside an MPEG frame" as recited in the *dependent claims 8, 16, 18 and 26.*

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Chang whose telephone number is (571) 272-3129. The examiner can normally be reached on Monday - Friday from 8 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571) 272-3139. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

rkc

Richard Chang
Patent Examiner
Art Unit 2663

RICKY NGO
PRIMARY EXAMINER

3/14/05